



## **ROUTE CONCEPT REPORT**

**STATE ROUTE 55  
COSTA MESA FREEWAY  
12-ORA PM 0.00/G17.86**



October 2000



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### **CALTRANS DISTRICT 12 APPROVAL**

Recommended For  
Approval by:

Approval by:

\_\_\_\_\_  
Judy L. Heyer  
Acting District Division Chief  
Division of Planning

\_\_\_\_\_  
Ken Nelson  
Acting District Director

Date \_\_\_\_\_

Date \_\_\_\_\_

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**STATE ROUTE 55**  
**COSTA MESA FREEWAY**  
**12-ORANGE 55 PM 0.00/G17.86**

**SUMMARY**

**STATE ROUTE 55**

State Route 55 (SR-55), also known as Costa Mesa Freeway, provides north-south access in Orange County. It is the main arterial connecting the Inland Empire Counties to central and south Orange County. It also is the main route to the beach and tourist attractions in the county's coastal communities. The average daily traffic (ADT) varies from 48,000 to 223,000. SR-55's High Occupancy Vehicle (HOV) lanes was Orange County's first such facility and have been in operation since 1985. During weekday peak periods (morning and afternoon), the mixed flow lanes experience congestion and the carpool lane operates at near capacity.

SR-55 is part of the local arterial system from Finley Avenue in the city of Newport Beach to 19th Street in the city of Costa Mesa. From 19th street to SR-91, Route 55 is part of the freeway system. Prior to 1992 the freeway portion of SR-55 ended at Mesa Drive merging with Newport Boulevard. In 1992 the freeway portion of SR-55 was extended to 19th Street. Caltrans relinquished Newport Boulevard between Mesa Drive and 19th Street to the City of Costa Mesa for local control in 1996.

**ROUTE CONCEPT**

The Concept for this route is to provide the best Level of Service (LOS) possible and reduce the duration of congestion. If no major capital improvements are made, it is anticipated longer traffic delays will occur. Recommended improvements include the extension of the HOV lane from I-405 to SR-73 and increasing SR-55 from an 8 to a 10 lane facility from SR-22 to SR-91.

The 1986 Route Concept Report (RCR) and this 1996 update include as a part of the Concept the extension of SR-55 freeway from Mesa Drive to Industrial Way. Freeway extension between Mesa Drive and 19th Street was completed in 1992. However, construction of the freeway between 19th Street and Industrial Way may not be fiscally feasible for some time because of existing development. Freeway construction through this area would require major right of way acquisition. Orange County Transportation Authority's (OCTA) transitway project includes improvements at I-405/SR-55 and Caltrans has an operational improvement project to extend the auxiliary lane through the Dyer Road overcrossing. Other improvements on Route 55 will include construction of overcrossing and HOV drop ramp at Alton Avenue, and completing the missing freeway connection at SR-73 interchange.

For planning purposes, this route has been divided into eight segments shown in table below and on the *Strip Map* displaying SR-55 segments following the *location Map*.

## LOCATION MAP



Recommended changes from existing condition are shown in ***bold italics***.

## LOS SUMMARY TABLE

Seg	Postmile	Limits	Year 1997 No. of Lanes/Peak Hour LOS	Year 2020 Concept No. of Lanes/Peak Hour LOS	TOPS LOS
<b>1</b>	0.00/0.27	Finley Avenue to PCH	4 F0	4 Lane Conventional Hwy F3	
<b>2</b>	0.27/1.01	PCH to Industrial Way	6 F0	6 Lanes Express Hwy F0	
<b>3</b>	1.01/R2.07	Industrial Way to 19th Street	6 F2	<b><i>6 Lane Freeway</i></b> D	
<b>4</b>	R2.07/R4.73	19th Street to SR-73	8 D	8 Lane Freeway & Aux Lane * F0	
<b>5</b>	R4.73/R5.99	SR-73 to I-405	8 E	6 Lane Freeway + <b><i>2 HOV</i></b> D	
<b>6</b>	R5.99/10.45	I-405 to I-5	8 + 2 HOV F3	8 Lane Freeway + 2 HOV & <b><i>Transitway Project, Aux Lanes</i></b> F0	
<b>7</b>	10.45/12.96	I-5 to SR-22	8 + 2 HOV F0	8 Lane Freeway + 2 HOV & Aux E	
<b>8</b>	12.96/G17.86	SR-22 to SR-91	6 + 2 HOV F1	<b><i>8 Lane Freeway</i></b> + 2 HOV & Aux F0	

\* Auxiliary lanes where feasible

The segments where capacity enhancements are planned show improved level of service and reduced congestion. Other planned highway projects will have a major impact on this route's LOS. For example, the Concept includes extension of the existing SR-57 as a private toll road from I-5 to I-405. LOS in the southern portion of SR-55 (south of I-5) is expected to deteriorate without the SR-57 extension.

## **TABLE OF CONTENTS**







# **ROUTE CONCEPT REPORT**

## **STATEMENT OF PLANNING INTENT**

The Route Concept Report (RCR) is an internal planning document which expresses the Department's judgment on what the characteristics of each state highway should be in response to proposed land use and projected travel demand over a 20-year planning period. Route Concept Reports are prepared in the districts and represent the combined expertise of district, local and regional agencies staff.

The RCR contains the Department's goals for the development of each route in terms of Level of Service (LOS). One of the Department's goals is the proposed concept of Traffic Operations Strategies (TOPS). The RCR broadly identifies the nature and extent of improvements needed to reach those goals. More specific design and operational detail will be included and analyzed in subsequent project development documents such as Project Study Reports, Environmental Documents, Project Reports and Preliminary and Final Design. These Concept reports are used in the development of the District System Management Plan and other state and local planning and project development documents. For purposes of this report, projects under construction are included as completed for the year 2020 horizon year.

The traffic data for this report has been prepared for the following alternatives: Base Year 1997, Year 2020 Null (projects under construction and funded), Year 2020 Concept and Year 2020 TOPS. System maps for the three alternatives are displayed in Appendix 7.

The Concept LOS for this report is based on the ratio of Year 2020 forecast demand volumes to facility capacity for each segment of the roadway. The LOS shown in Table 8 (ADT Summary Table) is for peak hour/peak directions. See *Appendix 1 - Graphic Representation and Definition of Levels of Service* on page A1.

In developing this RCR, the System Planning Branch considered using the metric system for designating segment limits and other significant points along this route. It was decided that it would be inappropriate for System Planning to perform even "soft conversions" at this point in the planning process. System Planning will begin using the metric system in RCRs and other System Planning documents when the postmile system is converted and a standard set of data is in use throughout the District.

Information contained in the RCR is subject to change as conditions and priorities change and as new information is obtained. The nature and size of identified improvements may change as they move through the project development stages, with final determinations made at the time of project planning and design. Changes that occur during project development may require revision of the RCR.

Preparation of this report included field reviews, review of planned and programmed projects, review of previous RCRs prepared for this route, projects under construction, and analysis of Level of Service. Internal documents from Traffic, Maintenance, Project Development and Programming, and external documents from Orange County Environmental Management Agency (OCEMA), Orange County Transportation Authority (OCTA), and Southern California Association of Governments (SCAG) were referenced for this RCR. Coordination with the Advanced Planning/Intergovernmental Review Branch was also undertaken to ensure consideration of external issues impacting this route.

## **ROUTE DESCRIPTION**

State Route 55, SR-55, also known as Costa Mesa Freeway, is 17.86 miles long and is located entirely within County of Orange. The entire route is in an urbanized setting traversing six cities (Newport Beach, Costa Mesa, Tustin, Santa Ana, Anaheim, and Orange) and unincorporated portions of Orange County. Traveling northbound, it intersects with SR-1 (PM 0.27), SR-73 (PM 4.73), I-405 (PM 5.99), I-5 (PM 10.45), SR-22 (PM 12.96), and SR-91 (PM 17.86). This route serves major employment centers in the six cities. Other major traffic generators along SR-55 include:

- Coastal Recreational Facilities
- Hoag Hospital
- Newport Center/Fashion Island
- Downtown Costa Mesa Business Center
- Orange County Fairgrounds
- John Wayne Airport
- South Coast Metro area
- University of California Irvine (UCI)
- Santa Ana Civic Center
- Western Medical Center
- Mall of Orange

### **History**

SR-55 was added to the State Highway System in 1931 (formerly SR-43) and the State Freeway/Expressway system in 1959, and it was originally named the “Newport” freeway. The first section of SR-55 between Chapman Avenue and SR-91 opened in 1962. In 1966, the section between SR-73 and Chapman Avenue opened to traffic. This facility was renamed the “Costa Mesa” Freeway in 1976. In October of 1985, Orange County's first High Occupancy lane (HOV) opened on this route between I-405 and SR-91. The freeway section of SR-55 from Mesa Drive to 19th Street was completed in summer of 1992. In late 1995, the county's first direct HOV/transitway connector opened at I-5/SR-55 interchange. This 1.4 mile long elevated facility connects carpool lanes between the two freeways (NB SR-55 to NB I-5 and SB I-5 to SB SR-55).

## CURRENT ISSUES/PROBLEM IDENTIFICATION

### Downtown Costa Mesa/Triangle Square

Downtown Costa Mesa is located at the end of the constructed SR-55 freeway at the Harbor Boulevard confluence. This area incorporates major retail and entertainment complex center, which includes developments such as Triangle Square with multi-screen movie theatre, restaurants and parking structure. Downtown Costa Mesa experiences much congestion during weekday peak periods and on the weekends.

Table 1 displays the ADT at the SR-55/Harbor Boulevard confluence:

Table 1: ADT at Harbor Blvd. Confluence

Facility	Direction	ADT at the Confluence
SR-55	SW-NE	88,000
Harbor Boulevard	N-S	35,000
19th Street	E-W	34,000
Newport Boulevard	SW-NE	42,000

Close to 200,000 vehicles converge to and from this area daily causing congestion. The City of Costa Mesa has initiated a project to study the feasibility of adding an extra lane in each direction between 17<sup>th</sup> and 19<sup>th</sup> streets on Newport Boulevard to relief congestion in this area. Caltran's Project Study Report (PSR) branch is working on this project's details. This project has acquired partial funding from Regional Surface Transportation Program (RSTP). The total estimate for this project is \$4.6 and it will be locally funded.

### Transitway Projects

A major project on SR-55 is under construction at I-405/SR-55 interchange. This facility will provide direct HOV/Bus access between the two freeways. The main impact of this facility will be a drastic reduction of weaving movement by carpoolers and buses traveling between these two routes. This project is funded primarily by Measure "M" with additional funds from federal government and City of Costa Mesa. The construction on this project started in early 2000 and is scheduled for completion in 2004. With completion of I-5/SR-55, I-5/SR-57, and I-5/I-405 direct HOV connectors along with I-405/SR-55, will provide carpoolers traveling in Orange County an exclusive HOV facility, thus reducing weaving movements and impacts to mixed flow lanes.

### **State Route 73**

State Route 73 (Corona Del Mar Freeway) interchanges with SR-55 at postmile 4.73. SR-73 continues south of Jamboree Road as the San Joaquin Hills Transportation Corridor (SJHTC) Toll Road. SR-73 Toll Road's entire length opened to traffic in November of 1996. The diversion of trips from I-5, I-405, and SR-1 to the Toll Road will impact the SR-55/SR-73 interchange in the long run. There was no freeway connector from northbound SR-73 to southbound SR-55 at present time. This new freeway connector opened to traffic in September of 2000.

### **Northbound Edinger Avenue Ramp Reconstruction**

The City of Tustin prepared a Project Study Report (PSR) in 1998 proposing modifications to the Northbound Edinger on/off ramp. The main reason for this ramp's modification is to accommodate land use change in the City of Tustin adjacent to SR-55. This project is locally funded but there is no schedule set for construction. ([Check with Andrew Oshrin- Also reflect timing on the table of projects](#))

### **Relinquishment from Finley Avenue to Pacific Coast Highway**

SR-55 's first Segment (PM 0.00 to 0.27) from Finley Avenue to Pacific Coast Highway is located in the City of Newport Beach. The City of Newport Beach has shown interest acquiring this section of Newport Boulevard from the State of California. The relinquishment process starts with a resolution passed by the city council expressing interest in acquiring SR-55 (PM 0.00 to PM 0.27), followed by a legislative enactment and an action by California Transportation Commission (CTC). As a part of relinquishment process, Caltrans is responsible to place the roadway in the state of "good repair". [The relinquishment process starts with Newport Beach. Next there has to be a sponsor in the legislature \(bill\). Once the bill is approved, the facility has to be brought to "good working order", this is done by Caltrans or the funds are provided to the city so they could do work themselves. \(Nooshin\)](#)

### **Alton Ave Overcrossing and HOV Dropramp**

Alton Parkway is a major arterial in the city of Irvine. Its northern terminus is east of SR-55. Alton Avenue in Santa Ana is at present a minor arterial west of Costa Mesa Freeway. Cities of Santa Ana and Irvine prepared a PSR in 1992 to construct an overcrossing on SR-55 thus connecting Alton Avenue between the two cities. The project will be constructed in two phases. In phase one, the overcrossing will be built, and phase two will add direct HOV connectors to the structure. This project has not been funded and Cities of Santa Ana and Irvine are pursuing funding source.

## ROUTE PURPOSE AND CLASSIFICATION

SR-55 runs in a north-south direction beginning south of SR-1 and ending at SR-91. This route provides access to recreational and tourist areas at its southern terminus, and at its northern end, SR-55 provides access for Inland Empire commuters. Santa Ana Freeway (I-5) interchange cuts SR-55 in half and provides a southeast-northwest access for travelers on this route. The route is distinctly multipurpose in the type of travel it provides, serving commuters, tourists, recreational, and local access to private and public properties.

### Federal/State Functional Classification

SR-55 is classified as Other Freeway or Expressway throughout Orange County.

Table 1: Route Classification

Designation	Postmile	Limits
National Highway System (NHS)	4.73 to 17.86	SR-73 to SR-91
National Truck Network	5.99 to 17.86	I-405 to SR-91
Terminal Access Route	0.00 to 5.99	SR-1 to I-405
Subsystem of Highway for the movement of Extra Legal Loads (SHELL)	5.99 to 17.86	I-405 to SR-91
12 Feet Wide Arterial System	0.00 to 17.86	SR-1 to SR-91

### Orange County Classification

SR-55 is classified as a State Freeway/Conventional Highway on the County Master Plan of Arterial Highways (MPAH). The MPAH identifies state freeway for reference purposes only.

## ROUTE ANALYSIS

Route 55 interchanges with five freeways and one conventional state highway. There are twelve local Street ramped interchanges along the freeway portion of SR-55. SR-55 is a 4/6 lane conventional/expressway facility from Finley Avenue (PM 0.00) to 19th Street (PM 2.07). From 19th Street to SR-91 (PM 17.86), the route is a 6/8 lane freeway. There is an HOV lane on this route from I-405 to SR-91. Construction is underway on SR-55 to widen the existing facility to eight mixed flow lanes between SR-22 and SR-91. Upon the completion of this project SR-55 should experience some relief in congestion between I-5 and SR-91.

Table 2 displays SR-55's interchange with other freeways and conventional highways. SR-55 provides access to most major streets, employment centers, and residential areas, airports, train stations, and military facilities in Orange County.

Table 2: SR-55 Interchange with other Interstate & State Highway Facilities

Route Number	Route Name	Crossing Postmile
SR-1	Pacific Coast Highway	0.27
SR-73	Corona Del Mar Freeway	R4.73
I-405	San Diego Freeway	R5.99
I-5	Santa Ana Freeway	10.45
SR-22	Garden Grove Freeway	12.96
SR-91	Riverside Freeway	G17.86

### Parallel Alternative Facilities

There are no major routes that parallel SR-55 in its entire length. The only freeway that parallels this route is SR-57, which is located about three miles west of the northern third of SR-55. Tustin Avenue serves as parallel local arterial alternative to Costa Mesa Freeway north of SR-55/I-5 interchange, and Red Hill Avenue serves as parallel local arterial alternative south of SR-55/I-5 interchange

### Land Use

For transportation planning purposes, Orange County is considered to be a fully urbanized county. The county is a continuation of the greater Los Angeles metropolitan area with the Pacific Ocean to the west, the Cleveland National Forest to the east and the Camp Pendleton Marine Corps Base to the south. The majority of the land in the county not within or adjacent to the boundaries of the national forest is developed. The primary land use is residential, with pockets of retail commercial, light industrial and professional office spaces. Industrial and commercial uses usually border freeways and major arterials.

For the purpose of this report, the county is roughly divided into north and south by SR-55 from Newport Beach to Chapman Avenue in the City of Orange. The dividing line turns east on Chapman Avenue to Santiago Canyon Road east of Silverado Canyon Road east to Orange/Riverside County Line. North County lies west of SR-55 and north of Santiago and Silverado Canyon Roads. In this older portion of the county, most of the street system is based on the arterial grid system. South County lies south of Santiago and Silverado Canyon Roads and east of SR-55. South County contains much more new development and the street pattern meanders with the contours of the land. See Exhibit 1.



**Route Concept  
County North/South Split Map**

### **Military Operation**

The Tustin United States Marine Corps Air Station was located south of I-5/SR-55 interchange. U.S. Navy built its Lighter-Than-Air Base in City of Tustin in 1942. The base was later changed from a naval base to a marine facility supporting helicopter operations and was renamed Marine Corps Air Station (MCAS). The base occupied 1600 acres. This military base ceased to operate in 1997, but the impacts on SR-55 are not known at this time. The City of Tustin has prepared an environmental document about the future of this land site.

### **Newport Boulevard Relinquishment**

Caltrans relinquished the Newport Boulevard frontage roads between Walnut Street/Ford Road and Bristol Street (PM 2.0 to 4.7) to the City of Costa Mesa in April of 1996.

### **Transit Services**

Orange County Transportation Authority (OCTA) is the primary bus operator in the County. There is no regular bus service which currently operates on the freeway section of SR-55. The only "major" service (OCTA bus route 71 Orange to Irvine) uses Tustin and Red Hill Avenue as an alternative to SR-55. OCTA bus route 373 (Irvine to Brea) uses SR-55 between Dyer Road and Lincoln Avenue. OCTA bus route 53 provides service between Balboa Peninsula and Cities of Costa Mesa and Orange travels on SR-55 (Newport Boulevard.) from SR-1 to Hospital Road.

### **Major Park and Ride Transportation Centers**

SR-55 is served by one major Park-and-Ride facility. Caltrans developed this Park-and-Ride facility and it provides 74 spaces. The Orange Park and Ride lot is located at southeast corner of Lincoln and Tustin Avenue.

### **Bicycle Facilities**

Bicycles are only allowed on SR-55 (Newport Blvd.) between Finley Avenue and 19th Street. (PM 0.00 to 2.07)

### **Passenger Rail Service**

There is no passenger rail serving the entire length of SR-55. The Inland Empire Metrolink's service to Orange county provides commuter rail service parallel to SR-55 between I-5 and SR-91 only on weekdays. Metrolink line maintains stations at Santa Ana, and Orange, and Anaheim Canyon. The Inland Empire line started its service in October of 1995 between Orange County and Inland Empire counties. This line provides six southbound trains (four southbound morning trains and two southbound afternoon trains) and six northbound trains (two morning trains and four afternoon trains). The Inland Empire line carried about 480,000 passengers in 1998. See Exhibit 2 for Metrolink System Map.

### **Truck Traffic**

SR-55 is not considered to be a major truck route in Orange County. The State Highway Inventory indicates that the truck percentage varies from 1.6% to 7.5% of the ADT. Segment near SR-1/SR-55 interchange show the least truck traffic while the segment of the route between I-5 and SR-22 shows the highest percentage of truck use.

Route 55 is part of the National Truck Network Route and the Subsystem of Highways for the movement of Extra Legal Loads (SHELL) system between I-405 and SR-91. See Exhibit 3 for Truck Traffic Map.

## **Metro Link System Map**

**Truck Traffic Map goes here**

## **TRAFFIC ANALYSIS**

### **Introduction**

SR-55 is a 6 to 10 lane freeway/expressway/conventional highway facility. It is the main route connecting northern and central Orange County to the coastal communities of Huntington Beach, Newport Beach, and Corona Del Mar. It is also the main artery connecting the Inland Empire Counties to central and southern Orange County.

### **Average Daily Traffic (ADT)**

The ADT summary sheet for SR-55 follows as Table XXX. There are four scenarios given for this information: Year 1998, Year 2020 Null (projects under construction & funded), Year 2020 Concept, and Traffic Operations Strategies (TOPS). The existing data was collected from the *1998 Traffic Volumes on California State Highways* book and from Los Angeles Regional Transportation Study (LARTS) base year forecast. Other sources of information used for existing volumes may include: count stations and other information taken from previously completed environmental documents and project related studies.

The future traffic data presented in this document is a product of Los Angeles Regional Transportation Study (LARTS) model. The peak hour traffic volume, peak hour direction volumes, and LOS are all products of the LARTS transportation model.

### **Transportation Modeling Description and Socioeconomic Summary**

The future traffic data presented in this document is a product of the Los Angeles Regional Transportation Study (LARTS) transportation model. The LARTS model simulates the interaction between socioeconomic factors and the transportation system. The LARTS model is a socioeconomic driven transportation model. Among existing and projected socioeconomic variables used in the development of the LARTS model are: population, employment, and income.

The transportation system includes highway and transit service (includes rail service)

The Southern California Association of Governments (SCAG), in cooperation with state and local county governments (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial) prepared the socioeconomic forecast for the year 2020. In April 1998, SCAG completed the Regional Transportation Plan (RTP) CommunityLink21, the long range transportation plan for the SCAG Region. The socioeconomic data inputs used in traffic forecast for this RCR are identical to SCAG's 1998 RTP. Table XXX provides a summary of the socioeconomic variable input for the year 2020 at the county and the region level.

Table 5: Year 2020 Socioeconomic Data Summary

Socioeconomic Data	Year 2020-Orange County*	Year 2020-Region **
Population	3,206,020	20,632,271
Housing	1,094,024	7,151,115
Employment	2,101,316	10,028,476

\* Source: Orange County Transportation Authority

\*\* Source: Southern California Association of Governments (except Orange County)

\*\* Los Angeles, Orange, Ventura, and Metropolitan portions of Riverside, and San Bernardino counties

### Goods Movement

SR-55 is not considered to be a major truck route in Orange County. The State Highway Inventory indicates the truck usage on SR-55 varies from 1.6% to 7.5% of the Average Daily Traffic (ADT). Segment near SR-1/SR-55 interchange shows the least truck traffic while the segment between I-5 and SR-22 shows the highest truck traffic use.

Route 55 is part of the National Truck Network Route and the Subsystem of Highways for the movement of Extra Legal Loads (SHELL) system between I-405 and SR-91. See Exhibit XX for Truck Traffic Map.

### Traffic System Management

Traffic Systems Management is a strategy for improving mobility on the transportation system without adding capacity. The theory is to implement operational improvements and disseminate motorist information to achieve the maximum operating efficiency of the transportation system. In particular, Caltrans' goal is to develop all freeways in Orange County to full Urban Freeway Standards. Integral to this development is the Traffic Operation Systems (TOS) Plan and the system elements outlined in it. See *Appendix 7 - Urban Freeway Standards* for an introduction to the TOS Plan and its system elements.

Though there are TOS elements currently in place on SR-55 such as ramp metering, changeable message signs and closed circuit television cameras. In addition to the existing system, additional elements will be added to enhance existing freeway surveillance coverage. One of the new elements is system wide fiber optic communication. More elements are planned and will be accounted for in the installation of conduit and fiber optic cable, however not all of the planned elements are funded. Wherever possible these items should be included as part of larger projects to save time and money on project development and construction.

SUMMARY TABLE 2 GOES HERE



## **ACCIDENT RATES**

### **Automobiles**

The accident rate information shown in this report is taken from Table B of the Traffic Accident Surveillance and Analysis System (TASAS). This information should be used for general planning purposes and as an indicator of how the accident rate of a particular segment of a route compares to the accident rate averages on similar routes statewide. Higher than average rates described in this report are alone not an indicator of a significant problem, since accident rates can be greatly influenced by the length of the segment and the time period being measured. See appendix 3 for TASAS Table B information on SR-55.

The Accident Surveillance Procedures Manual developed by the Division of Traffic, is used to ensure that Caltrans has statewide consistency in identifying safety problem locations and for developing recommended solutions. One tool used in this process is the TASAS table C report which lists high accident concentration locations and uses an automated system for flagging location requiring investigation.

Highway safety on state highways is Caltrans number one priority. Identification of safety problem areas is continuous process. After a safety project is identified, it is prioritized as soon as possible and programmed in either the State Highway Operation and Protection Program (SHOPP), or through the District Minor Program. For more detailed information please refer to the Accident Surveillance Procedures Manual.

### **Bicycles**

Caltrans TASAS data is used to identify bicycle accidents that have occurred over a given time frame. There were thirty reported bicycles accidents on SR-55 between 7-1-95 and 7-1-98. None of these accidents were fatal and all occurred on the conventional highway/expressway portion of SR-55 (Newport Boulevard between Finley Avenue in Newport Beach and 19th Street in Costa Mesa). More than a third of these accidents occurred on weekends.

## MAJOR PROGRAMMED PROJECTS

This section lists major capacity enhancement and operation projects programmed for construction beginning in State Fiscal Year 96 (FY 96/97) or later. Programmed projects are defined as having a schedule and cost. Projects are programmed into one of the three State Highway Programs: State Transportation Improvement Program (STIP), the State Highway Operation and protection Program (SHOPP), and the Traffic System Management (TSM) program. Programmed projects also include locally funded and administered projects, noted as LOCAL.

Table 4: Major Programmed Project Summary

PPN #	PM	DESCRIPTION	CODE	EST\$	FY ADV
3457B	R5.7/R8.3	Widen Undercrossing & Ramp	SHOPP-OHC	2.9M	98/99
3495	9.0/9.1	Reconstruct NB Ramp Edinger	LOCAL	5.8M	99/00
3530	12.7/13.4	Widen Freeway SR-22 to La Veta Ave. *	LOCAL	22.0M	97/98
3530A	13.4/14.4	Widen Freeway La Veta Ave to Walnut. *	LOCAL	28.0M	97/98
3530B	14.4/15.6	Widen Freeway Walnut to Taft Ave. *	LOCAL	17.5M	97/98
3530C	15.6/17.6	Widen Freeway Taft Ave. to SR-91. *	LOCAL	23.2M	97/98
4999 **	7.6/9.6	Route 405/55 N HOV connection	LOCAL	87.0M	99/00
3301	7.5/7.6	Construct Alton OC/HOV access Ramps	LOCAL	31.0M	03/04
4999C **	7.6/9.6	I-405/SR-55 S HOV Connection *	LOCAL	27.0M	98/99

**Legend:**

PPN = Planning and Program Number

PM = Postmile

FY ADV = Fiscal Year of Advertising

OHC = Other Highway Construction

LOCAL = Locally Funded Projects

SHOPP = State Highway Operation Project Program

TSM = Traffic System Management

\* **Under Construction**

\*\* **I-405 Postmile/Under Construction**

## ROUTE CONCEPT

### Introduction

The Concept will provide additional capacity in portions of SR-55, but some segments will continue to operate at unacceptable Level Of Service (LOS). Due to environmental and financial constraints, it will be impossible to relieve congestion on urban roadways strictly by adding capacity. Therefore, it will be necessary now, and in the future, to better manage the existing transportation system to its full potential.

### Regional Consistency

The route concept called for in this report is consistent with the 1998 Regional Transportation Plan (RTP) Community Link21 by SCAG except for recommendation shown in segment 3. The RTP is the long-term regional transportation plan for the six County Southern California Region. By law, all projects programmed in the Regional Transportation Improvement Program (RTIP) must be contained in the regional transportation plan and have funding source identified. Most of the major projects already programmed or planned for this route will meet this route concept. All projects currently programmed in the RTIP for SR-55 are contained in the RTP, therefore this Concept is consistent with regional planning efforts.

### Segment by Segment Analysis

#### Segment 1 (PM 0.00/0.27)

<b>Existing Facility: Conventional Highway</b>	<b>6 lanes</b>	<b>LOS: F3</b>
<b>Concept Facility: Conventional Highway</b>	<b>6 lanes</b>	<b>LOS: F3</b>

This segment currently operates as 4 through lanes. The Concept is consistent with Orange County's Master Plan of Arterial Highways (MPAH).

#### Segment 2 (PM 0.27/1.01)

<b>Existing Facility: Expressway</b>	<b>6 lanes</b>	<b>LOS: D</b>
<b>Concept Facility: Expressway</b>	<b>6 lanes</b>	<b>LOS: F0</b>

This segment currently operates as 6 through lanes. The Concept calls for no changes in this segment.

The SR-1/SR-55 interchange reconstruction was completed in 1997 and has improved traffic flow at this interchange. (Check with Nooshin on the date)

**Segment 3 (PM 1.01/R2.07)**

<b>Existing Facility: Conventional Highway</b>	<b>6 lanes</b>	<b>LOS: F0</b>
<b>Concept Facility: <u>Freeway</u></b>	<b>6 lanes</b>	<b>LOS: D</b>

This segment currently operates as 6 through lanes. The Concept calls for the extension of SR-55 freeway from 19th Street to Industrial Way. The projected LOS for the Concept would be D. However, construction of the freeway in this area may not be fiscally feasible for some time because of existing development. Freeway construction through this area would require major right of way acquisition.

**Segment 4 (PM R2.07/R4.73)**

<b>Existing Facility: Freeway</b>	<b>8 lanes</b>	<b>LOS: C</b>
<b>Concept Facility: Freeway</b>	<b>8 lanes</b>	<b>LOS: F0</b>

This segment currently operates as 8 through lanes. The Concept calls for no major changes in this segment. The Concept LOS is projected to be at F0 range.

The missing freeway connection (NB SR-73 to SB SR-55) at Corona Del Mar Freeway interchange (SR-73) was completed in September of 2000.

**Segment 5 (PM R4.73/R5.99)**

<b>Existing Facility: Freeway</b>	<b>6 lanes</b>	<b>LOS: D</b>
<b>Concept Facility: Freeway</b>	<b>6 lanes +2 HOV</b>	<b>LOS: D</b>

This segment currently operates as 6 through lanes. The Concept calls extension of the existing HOV lanes to Corona Del Mar Freeway (SR-73). The Concept LOS is projected to be at D range in this segment.

**Segment 6 (PM R5.99/10.45)**

<b>Existing Facility: Freeway</b>	<b>8 lanes + 2 HOV</b>	<b>LOS: F1</b>
<b>Concept Facility: Freeway</b>	<b>8 lanes + 2 HOV</b>	<b>LOS: F0</b>

This segment currently operates as six to eight through lanes and two HOV lanes. The Concept calls for eight mixed flow and two HOV lanes from I-405 to I-5 interchange. The Concept LOS is projected to be at F0 range.

SR-55 consists of four directional mixed flow lanes and an HOV lane north and south of Dyer Road overcrossing. At Dyer Road overcrossing route 55 consists of three mixed flow lanes and an HOV lane in each direction. Loss of a lane at this section causes congestion in the northbound SR-55, south of Dyer Road, and southbound SR-55 north of Dyer Road. A project has been programmed for operational improvement to extend the auxiliary lane between MacArthur Boulevard and Dyer Road through Dyer Road overcrossing.

Another key component to programmed improvements in this section is the construction of I-405/SR-55 transitway project. This project will include direct HOV/transitway connectors between the two freeways. Other projects that have been programmed includes construction of Alton Avenue HOV drop ramp and reconstruction of the northbound ramp at Edinger Avenue. (See PROGRAMMED PROJECTS on page 15).

**Segment 7 (PM 10.45/12.96)**

<b>Existing Facility: Freeway</b>	<b>8 lanes +2 HOV</b>	<b>LOS: F0</b>
<b>Concept Facility: Freeway</b>	<b>8 lanes +2 HOV</b>	<b>LOS: E</b>

This segment currently operates as eight through lanes and two HOV lanes from I-5 to 17th Street. From 17th Street to SR-22, SR-55 operates as six through lanes and two HOV lanes. The Concept calls for eight mixed flow lanes and two HOV lanes for the entire segment. The Concept LOS is projected to be at range E in this segment.

**Segment 8 (PM 12.96/G17.86)**

<b>Existing Facility: Freeway</b>	<b>6 lanes +2 HOV</b>	<b>LOS: F0</b>
<b>Concept Facility: Freeway</b>	<b>8 lanes +2 HOV</b>	<b>LOS: F0</b>

This segment currently operates as six through lanes and two HOV lanes. The Concept calls for eight mixed flow lanes and two HOV lanes for the entire segment. The Concept LOS is projected to be at range F0 in this segment.

There is an ongoing project widening route 55 between SR-22 and SR-91 interchange by adding one mixed flow lane in each direction. This project is scheduled for completion by the year 2001.

## **TRAFFIC OPERATIONS STRATEGIES (TOPS)**

TOPS was proposed by Caltrans Districts 7, 8, 11, and 12 to maximize utilization of the existing urban freeway system through performance-based investment strategies. TOPS recommends improvements for this route, including programming, funding, and comprehensive system management. A system wide Concept report for Southern California is being developed. Full implementation of TOPS will take place over a 5-10 year span depending on the level of improvement required and available funding. As a result of TOPS, the Concept for this route anticipates Level of Service (LOS) of “E” (see Table 7 – LOS Comparison Chart on page 29) which will reduce delay to motorists and the trucking industry.

In the past, Caltrans Route Concept Reports focused on adding mixed flow or high occupancy vehicle lanes (HOV) in locations where the existing/projected traffic shows LOS “F” (stop and go condition). Widening alone is no longer the best solution to meet the existing and projected demand on the system.

Transportation professionals, looking for better ways to improve the overall performance of the system, believe the most cost effective and efficient solution is to maximize capacity on the existing facility and maintain a steady flow of traffic by implementing a series of traffic operations strategies. For example, during peak hour congestion with stop and go conditions, freeway capacity is reduced to about 6,000 vehicles per hour (1500 vehicles per lane) and speeds of 20 mph. If smooth, free flowing operational conditions could be maintained (LOS “E”) throughout the system, a freeway would carry about 30% more vehicles than a congested facility and speeds of approximately 40 mph.

TOPS program is divided into three phases or levels of strategy. These levels are:

Level 1 which includes improvements such as traffic management system, a traffic information system, an incident response system, ramp and street access modifications, and freeway auxiliary lanes.

This strategy would:

- Eliminate bottlenecks and choke points that cause stop and go conditions,
  - Implement a computerized highway-ramp metering system that would operate ramp meters as a network by continuously reading freeway flow rates and determine appropriate metering ratio for all on-ramps within the system, and,
  - Re-stripe freeway lanes or add auxiliary lanes to avoid weaving and congestion ‘hot spots’.
- Level 2 strategy concentrates on the High Occupancy Vehicle (HOV) system and includes HOV drop ramps, HOV freeway to freeway connections, and HOV gap closures.

Level 3 strategy would provide freeway interchange modifications and new lane miles where required.

The effects of the strategies on the TOPS are shown by the LOS Comparison Chart on the following page.

The ADT Summary Table 8 on pages 30-31 shows a more detailed information.

			<b>Year 1997</b>					
				No. of Lanes	PK HR PK DIR VOL		PK HR PK DIR LOS	
Seg	Post Mile	Limits	ADT		NB	SB	NB	SB
1	0.00/0.27	Finley Avenue to PCH	38,000	4/6	1,800	1,700	0.80/D	0.91/D
2	0.27/1.01	PCH to Industrial Way	48,000	6	2,700	2,700	1.20/F0	1.20/F0
3	1.01/R2.07	Industrial Way to 19th Street	73,000	6	2,900	3,100	1.29/F1	1.38/F2
4	R2.07/R4.73	19th Street to SR-73	125,000	8	5,600	5,300	0.70/C	0.66/C
5	R4.73/R5.99	SR-73 to I-405	135,000	8	5,900	5,700	0.74/C	0.71/C
6	R5.99/10.45	I-405 to I-5	262,000	8+2	12,000	11,800	1.26/F1	1.24/F0
7	10.45/12.96	I-5 to SR-22	232,000	8+2	9,200	9,300	1.23/F0	1.23/F0
8	12.96/G17.86	SR-22 to SR-91	231,000	6+2	9,500	8,600	1.27/F1	1.15/F0

			<b>Year 2020 NULL</b>					
				No. of Lanes	PK HR PK DIR VOL		PK HR PK DIR LOS	
Seg	Post Mile	Limits	ADT		NB	SB	NB	SB
1	0.00/0.27	Finley Avenue to PCH	72,000	4/6	2,300	2,200	1.02/F0	1.17/F0
2	0.27/1.01	PCH to Industrial Way	74,000	6	3,500	3,600	1.06/F0	1.09/F0
3	1.01/R2.07	Industrial Way to 19th Street	84,000	6	3,400	3,400	1.51/F3	1.51/F3
4	R2.07/R4.73	19th Street to SR-73	151,000	8	11,000	10,800	1.38/F2	1.35/F2
5	R4.73/R5.99	SR-73 to I-405	148,000	8	10,200	9,700	1.07/F0	1.21/F0
6	R5.99/10.45	I-405 to I-5	328,000	8+2	14,500	14,800	1.52/F3	1.53/F3
7	10.45/12.96	I-5 to SR-22	295,000	8+2	14,600	14,500	1.54/F3	1.53/F3
8	12.96/G17.86	SR-22 to SR-91	298,000	8+2	15,700	15,000	1.58/F3	1.53/F3

			Year 2020 CONCEPT					
				No. of Lanes	PK HR PK DIR VOL		PK HR PK DIR LOS	
Seg	Post Mile	Limits	ADT		NB	SB	NB	SB
1	0.00/0.27	Finley Avenue to PCH	72,000	4/6	2,000	2,000	0.89/D	0.89/D
2	0.27/1.01	PCH to Industrial Way	73,000	6	3,500	3,500	1.06/F0	1.06/F0
3	1.01/R2.07	Industrial Way to 19th Street	88,000	6	5,600	5,600	0.93/E	0.93/E
4	R2.07/R4.73	19th Street to SR-73	144,000	8	10,400	10,100	1.30/F1	1.26/F1
5	R4.73/R5.99	SR-73 to I-405	146,000	8	9,800	9,500	1.03/F0	1.00/E
6	R5.99/10.45	I-405 to I-5	314,000	8+2	13,700	14,500	1.44/F2	1.53/F3
7	10.45/12.96	I-5 to SR-22	290,000	8+2	13,400	13,400	1.41/F2	1.41/F2
8	12.96/G17.86	SR-22 to SR-91	289,000	8+2	15,800	14,800	1.66/F3	1.56/F3

			Year 2020 TOPS					
				No. of Lanes	PK HR PK DIR VOL		PK HR PK DIR LOS	
Seg	Post Mile	Limits	ADT		NB	SB	NB	SB
1	0.00/0.27	Finley Avenue to PCH	72,000	4/6	2,000	2,000	0.89/D	0.89/D
2	0.27/1.01	PCH to Industrial Way	73,000	6	3,500	3,500	1.06/F0	1.06/F0
3	1.01/R2.07	Industrial Way to 19th Street	88,000	6	5,600	5,600	0.93/E	0.93/E
4	R2.07/R4.73	19th Street to SR-73	144,000	8	10,400	10,100	1.30/F1	1.26/F1
5	R4.73/R5.99	SR-73 to I-405	146,000	8	9,800	9,500	1.03/F0	1.00/E
6	R5.99/10.45	I-405 to I-5	314,000	8+2	13,700	14,500	1.44/F2	1.53/F3
7	10.45/12.96	I-5 to SR-22	290,000	8+2	13,400	13,400	1.41/F2	1.41/F2
8	12.96/G17.86	SR-22 to SR-91	289,000	8+2	15,800	14,800	1.66/F3	1.56/F3



## **APPENDICES**

## **APPENDIX 1**

### **Graphic Representation and Definition of Level Of Service**

## **APPENDIX 2**

**Traffic Data Tables  
Pages A2-1 Thru A2-3**

**Segment Summary Pages  
Pages A2-4 Thru A2-7**

**LINK BY LINK DATA FOR CONCEPT GOES HERE**  
**Year 1997**

**Null Link by link**

## **CONCEPT LINK BY LINK**

## APPENDIX 3

### Accident Rates from TASAS

TASAS Summary Table

#### SR-55

7/1/952 through 6/30/98

			ACTUAL			AVERAGE		
SEG	POSTMILE	DESCRIPTION	FATAL	FATAL + INJURY	TOTAL	FATAL	FATAL + INJURY	TOTAL
1	0.00/0.27	Finley to PCH	0.000	1.43	3.54	0.017	1.23	2.78
2	0.27/1.01	PCH to Industrial Way	0.000	0.82	2.34	0.016	0.78	1.75
3	1.01/R2.07	Industrial Way to 19th Street	0.015	1.72	3.30	0.014	0.87	1.93
4	R2.07/R4.73	19th Street to SR-73	0.007	0.19	0.63	.004	0.27	0.78
5	R4.73/R5.99	SR-73 to I-405	.0000	0.20	0.73	0.006	0.31	0.91
6	R5.99/10.45	I-405 to I-5	0.002	0.35	1.51	0.005	0.30	0.91
7	10.45/12.96	I-5 to SR-22	0.000	0.23	0.89	0.006	0.35	1.02
8	12.96/G17.86	SR-22 to SR-91	0.005	0.19	0.78	0.007	0.39	1.12

\*accident rates per million vehicles or per million vehicle miles from TASAS Table B

## **APPENDIX 4**

### **Bikeway Classifications**

- Class I Bikeway (Bike Path): Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow minimized.
- Class II Bikeway (Bike Lane): Provides a restricted right of way (striped lane) for the exclusive or semi-exclusive use of bicycles with through travel by motorized vehicles or pedestrians prohibited but with crossflows by pedestrians and motorists permitted.
- Class III Bikeway (Bike Route): Provides for shared use with pedestrians or motor vehicle traffic.



## **APPENDIX 5**

### **New Technology**

#### **Intelligent Transportation Systems (ITS)**

There are currently two pilot projects on-going in Orange County which may be considered as Intelligent Transportation System (ITS) projects. The first of these is the Mobile Video Surveillance and Communications Project. This project locates portable trailers at critical locations along the highway to monitor flow conditions on the mainline and interactively regulate on-ramp traffic flow. The second ITS project is the Integrated Freeway Ramp Meter/Arterial Adaptive Signal Control Project. This project will allow for the joint monitoring of the I-5 and I-405 interchange area and Alton Parkway by the District and the City of Irvine. The intent of both of these projects is to apply several new technologies in an effort to optimize traffic flow.

#### **Intelligent Vehicle Highway Systems (IVHS)**

These systems utilize what is also commonly referred to as smart systems. There are three basic components necessary to implement a fully functional IVHS. These three are discussed below.

##### **Advanced Traveler Information Systems (ATIS)**

This type of system would provide the motorist with real-time traffic routing information. This information could be provided to the motorist using virtually any medium including television, radio, telephone and personal computer. Information could be routed to offices, homes or even directly to an in-vehicle device.

##### **Advanced Traffic Management Systems (ATMS)**

These systems include the potential use of AVI (Automatic Vehicle Identification) systems and ATIS for electronic detection and interface with real-time TOS information. Other areas of research include bottleneck evaluations and the policies and procedures to be required for automated highway operation.

##### **Automated Vehicle Control Systems (AVCS)**

The greatest potential for improving highway safety within the IVHS technologies is the AVCS. These systems can electronically enhance or automate driving functions. There are two basic types of driving control offered for use of this new technology. First is the lateral control system which controls vehicle steering, and the second is the longitudinal system which automates vehicle spacing, or the distance between vehicles. PATH (see below) is currently researching both types of driving control systems. It is anticipated that these systems are more long term innovations but do have a high potential for feasible implementation.

### **Showcase for IVHS - The Priority Corridor**

The Priority Corridor proposal is an endeavor to demonstrate the actual full potential of the transportation network with all possible new technologies in place and integrated. This comprehensive and coordinated approach should reveal new capabilities of the transportation system. It is meant to serve as a living laboratory for new developments in transportation.

The Priority Corridor is geographically described as: bounded on the north by SR-126 and I-210; on the east by SR-71, I-15 and I-215; on the south by the U.S. border with Mexico, the Otay Mesa Border crossing and SR-905; and on the west by the Pacific Ocean. This corridor includes a myriad of intermodal systems for moving people and goods. It is also an air quality non-attainment area and experiences severe congestion. The corridor is host to over half the population and jobs in California. It is being viewed as a Showcase for IVHS. This plan proposes to take full advantage of four Transportation Management Centers (TMC's), IVHS and Intermodal Transportation Management and Information System (ITMIS).

Consequently, the numerous and diverse difficulties experienced within the corridor area render it an ideal proving ground for new technology. These factors also provide an excellent opportunity to evaluate intermodal technologies, traffic management techniques, traveler information systems, passenger and fleet management systems, as well as freight vehicle control systems. Deployment and implementation of these different technologies will attempt to optimize and coordinate freeway and street operations with public and private transportation systems within the corridor. A cooperative effort among Caltrans, CHP, regional, county and city governments and the MPOs is essential to the success of Priority Corridor operations.

### **New Technology Research and Development**

The Program on Advanced Technology for the Highway (PATH) has been established in cooperation with Caltrans and the California Institute of Transportation Studies. PATH researches new technologies such as warning and avoidance systems and electronic braking. PATH also analyzes ATIS, IVHS and ATMS developments for costs and feasibility.

The District is committed to working with cities, the county, regional agencies, other state agencies, and academic institutions on the research, development and implementation of new technology in the development of the transportation system. The implementation of new technology is necessary to obtain optimum efficiency of the system.

## **APPENDIX 6**

### **Urban Freeway Standards**

In April 1992 the Transportation Planning Branch completed a Traffic Operation Systems (TOS) Plan for District 12. The TOS Plan outlined the traffic system management elements required for efficient operation of the state highway system. Following is an excerpt from that report.

“The goal of the Plan is to develop ultimate urban and regional freeways and highways, defined as transportation corridors, which have all system elements satisfied and will provide the following benefits:

- Operate facilities at maximum efficiency
- Minimize and manage travel delay and congestion
- Disseminate motorist information using advanced technologies.

The typical urban freeway operations plan includes:

- Electronic Loop Detectors
- Closed Circuit Television (CCTV)
- Changeable Message Signs (CMS)
- Highway Advisory Radio (HAR)
- Freeway Ramp Meters
- Communications System
- Traffic Management Center (TMC)
- Major Incident Response Teams
- Motorist Call Boxes
- Freeway Service Patrols (FSP)
- Airborne Surveillance
- Smart Corridor Interface with Local Agencies
- High Occupancy Vehicle (HOV) Facilities.

Methods to achieve maximum efficiency on transportation facilities include: ramp metering, freeway incident detection and confirmation (CCTV surveillance, etc.), freeway incident response teams, and FSP. Methods to disseminate motorist information include provision of real-time information on traffic conditions to allow motorists to make informed route decisions by using CMS, HAR, In-Vehicle Navigation Systems and teletext services (Commuter TV). Management of data includes monitoring technologies such as loop detectors and CCTV.”

The TOS Plan was updated by Traffic Operations in January 1994. This iteration of the TOS Plan refined definitions and uses of the various technologies outlined in the original report. More importantly the updated version looked closer at actual implementation plans and schedules. Several TOS elements were identified as individual projects with identified funding and implementation schedules. Because of potential cost savings several other projects were proposed to be included as an element of larger projects (widening/reconstruction, adding HOV

lanes, etc.); however in many of these cases no funding was identified. Finally, several new projects were identified which neither had funding nor implementation schedules.

Full implementation of the TOS Plan elements is an integral part of this and all other freeway route concepts in Orange County. It is the goal of Caltrans District 12 to bring each freeway route in Orange County up to urban freeway standards. It may be most cost effective to implement these items as part of larger projects in order to save on project development and engineering costs.

### **New Technology**

There are several elements of the existing and future transportation system which are referred to as "new technology". It would also be appropriate to consider most of these elements as Traffic System Management (TSM) elements. Most of the above mentioned TOS elements take full advantage of new technology and these categories have a good deal of crossover application between them. In addition to the TOS elements mentioned above in the URBAN FREEWAY STANDARDS section other New Technology programs are currently being implemented in Orange County, both on and off the State Highway System. Please see Appendix 5 NEW TECHNOLOGY for a brief outline of new technology programs and some implementation efforts currently underway in Orange County.

## **APPENDIX 8**

### **References**

Annual Average Daily Truck Traffic on the California State Highway System (1997)

California State Highway Log – District 7, District 8 and District 12 (1994)

Caltrans 1997 Traffic Volumes on California State Highways

OCEMA Existing Bikeways Map (1992)

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SCAG Regional Transportation Plan – CommunityLink 21 (1998)

Traffic Accident Surveillance and Analysis System (TASAS)

Traffic Operations Strategies (TOPS) – CT Southern District (8/98)

Traffic Operations Systems Plan (4/92 and 1/94)

Traffic Volumes on California State Highway (1997)

Transportation System Development Plan – District 12 (7/95)

Transportation Concept Report- Interstate 5 District 11 (1997)

## **ACRONYM GLOSSARY**

ADT - Average Daily Traffic

ATIS - Advanced Traveler Information Systems

ATMS - Advanced Traffic Management Systems

AVCS - Automated Vehicle Control Systems

AVI - Automatic Vehicle Identification

BRAC – Base Realignment and Closure

CBD - Central Business District

CCTV - Closed Circuit Television

CHP - California Highway Patrol

CMS - Changeable Message Sign

CTC - California Transportation Commission

DOD - Department Of Defense

DSMP - District System Management Plan

D/C – Demand/Capacity

EB - East Bound

EIR - Environmental Impact Report

EIS – Environmental Impact Statement

ETC - Eastern Transportation Corridor

FAA - Federal Aviation Administration

FCR - Flexible Congestion Relief

FSP - Freeway Service Patrol

FTC - Foothill Transportation Corridor

HAR -Highway Advisory Radio

HOT - High Occupancy Toll

HOV - High Occupancy Vehicle

ITS - Intelligent Transportation Systems

ITMIS - Intermodal Transportation Management and Information System

ITMS - Intermodal Transportation Management System.

IVHS - Intelligent Vehicle Highway Systems

JWA – John Wayne Airport

LACBD – Los Angeles Central Business District

LACMTA – Los Angeles County Metropolitan Transportation Authority

LARTS - Los Angeles Regional Transportation Study  
LOS - Level Of Service  
LOSSAN - Los Angeles San Diego  
LRA – Local Redevelopment Authority

MIS – Major Investment Study  
MCAS - Marine Corps Air Station  
MPAH - Master Plan of Arterial Highways  
MPO - Metropolitan Planning Organization

NB - Northbound  
NHS - National Highway System

OCEMA - Orange County Environmental Management Agency  
OCTA - Orange County Transportation Authority  
OHC - Other Highway Construction

PATH - Partners for Advanced Transit and Highways  
PM - Postmile  
PPN - Planning and Program Number  
PSR - Project Study Report

RAS - Rehabilitate and Safety  
RCR - Route Concept Report  
RME - Regional Mobility Element  
RSTP – Regional Surface Transportation Program  
RTIP - Regional Transportation Improvement Plan  
RTP – Regional Transportation Plan

SANDAG - San Diego Association of Governments  
SB - Southbound  
SCAG - Southern California Association of Governments  
SCRAA - Southern California Regional Rail Authority  
SHELL - Subsystem of Highways for the movement of Extra Legal Loads  
SHOPP - State Highway Operation and Protection Program  
SJHTC - San Joaquin Hills Transportation Corridor  
SOCTIIP -Southern Orange County Transportation Infrastructure Improvement Project  
STRAHNET – STRAtegic Highway NETwork  
SR - State Route  
STAA - Surface Transportation Assistance Act  
STIP - State Transportation Improvement Program  
STRAHNET - STRAtegic Highway NETwork

TASAS - Traffic Accident Surveillance and Analysis System  
TMC - Transportation Management Center

TOPS – Traffic Operations Strategies  
TOS - Traffic Operation Systems  
TSM - Traffic System Management  
TSM - Transportation System Management

UCI - University of California Irvine

WB - West Bound